SOME FURTHER NOTES ON THE SECOND EDITION OF THE FAUNA OF BRITISH INDIA—BIRDS, VOL. III

BY

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p. 2. *Irena puella.* Even at the present day the British Museum lacks sufficient material among many of the commonest Indian species to elucidate their moults and plumages, the old idea however that any species acquires its plumage by pigmentation without a moult has been discarded by practically every ornithologist in the world ; there has never been any proof that such a phenomenon can take place and a good deal of proof that such a thing is a physiological impossibility. An examination of the British Museum series however does show that first winter males resemble the adult female and by complete moult become adult the following spring. The juvenile of this well-known species appears to be unknown !

p. 6. *Oriolus o. oriolus.* I do not think there is any proof that this oriole winters in N.W. India at all, indeed the only record I can find is one from Karachi in September where it may be straggler at the seasonal migrations.

Many Indian orioles have longer wings than 142 mm. and I find a sexed series show ♂ 138-149, ♀ 132-146.

p. 24. *Saroglossa.* I cannot agree that an original error in spelling should be perpetuated, moreover it is not in accord with the International Rules to do so (Rule 19). The word is of course derived from the Greek *psar* (= a starling) cf. Psarisoma, etc. and Hodgson must have made a slip or else a printer's error crept in and it is on a par with Sturnopas*ter* altered to Sturnopas*tor* (p. 61).

p. 32. *Sturnus v. humii.* The description of the ' young birds ' plumage is not at all clear. Here by ' young birds ' is meant the first winter plumage and by ' nestling ' the juvenile plumage. In the description of the ' nestling ' plumage there is no mention made of white spots on the lower plumage nor of any buff spots on the upper plumage which we are told the ' young bird ' retains. As a matter of fact the first winter birds retain none of the juvenile or ' nestling ' dress, there being a complete moult, and in this dress are more profusely spotted on the under-parts than any other race of Starling. The breeding distribution is given as the Himalayas east to Nepal ; it is common enough in parts of Cashmere but it must be very local now-a-days in the Simla-Almora area ; at least there appear to be no records of it.

p. 33. *Sturnus v. minor.* The irides of females I shot were *bright gold* and not *white* ; a very striking and distinctive feature.

p. 34. *Sturnus v. poltaratzskii.* All races of Starling vary but the majority of this race have the ear coverts *purple*, *not green*, and is thus in contra-distinction to *v. vulgaris* ; a few, which I otherwise cannot differentiate, however have the ear coverts greenish.

p. 54. Fourth line from bottom ' nesting ' should be ' roosting '.

p. 56. Here as in many cases throughout the Fauna the terminology of the plumages varies. Sometimes by ' young birds ' juvenile plumage is meant, sometimes first winter plumage is meant ; sometimes by nestling the juvenile plumage is meant, sometimes the down plumage.

A few instances at random :—

' Young bird ' =juvenile.	' Young bird ' = 1st winter.	' Nestling ' =juvenile.
Acridotheres ginginianus.	*Sturnus humii.*	*Hirundo filifera.*
Motacilla citreola.	*Motacilla feldegg.*	*P. icteroides.*
Emberiza calandra.	*Emberiza stracheyi.*	*Emberiza arcuata.*
Alæmon alaudipes.	*Anthus cervinus.*	*Passer montanus.*

' Nestling ' = down plumage.

Motacilla cinerea.

The plumages of birds are difficult enough to understand but if the age-names of the plumages are not definitely fixed chaos is inevitable. ' Young bird ' is a thoroughly bad term as it means any bird which is not adult, ' nestling ' too is

a loose term and both have long been given up by most writers in favour of juvenile plumage and down plumage which are fixed plumages in the life cycle.

p. 66. Sub-family *Ploceinæ*. This is said to contain four Indian species ; it should be six.

p. 77. *Estrildinæ*. It is not quite correct to say that these have no spring moult. Many perhaps do not but it is a question I have not been able to go into ; *Amandava amandava* however certainly has a spring (prenuptial) moult as I pointed out some years ago (Ibis 1922, p. 647).

p. 78. *Munia malacca*. On line 1 the type locality is fixed as Belgaum ; lower down it is fixed as Ceylon. Looseness in fixing type localities leads to endless trouble.

p. 88. *Uroloncha rufiventris*. Here is one more example of the infinality of nomenclature ; Mr. Baker renames the *Munia pectoralis* of Blyth as he considers this name is preoccupied by *Amadina pectoralis* of Gould ; this is quite correct if these two birds belong to the same genus, however Mr. Matthew's in his *Birds of Australia* puts Gou'd's bird in the genus *Heteromunia* and if his views are adopted, Blyth's name will stand as *Uroloncha pectoralis*.

p. 91. *Uroloncha punctulata*. This bird certainly occurs in the hill Punjab, Dharmsala, Kangra Valley, etc.

p. 96. *Amandava amandava*. It still seems to be unknown though I recorded the fact (Ibis., 1922, pp. 646-7) that this Munia has a non-breeding dress which somewhat resembles that of the female and into which it moults after breeding.

p. 101. *Perissospiza*. This genus is split off from *Mycerobas* on what appear to me to be very trivial characters, especially as these Grossbeaks do not form an unwieldy group which for convenience might be divided up. The differences between say *icteroides* and *melanoxanthus* seem to be no greater than between say *Corvus splendens* and *Corvus tibetanus*.

p. 104. *P. carneipes*. The bird which ranges from Baluchistan to N. W. Himalayas and Turkestan is I consider quite separable and should stand as *speculigera* (*B.N.H.S.*, xxxi. 4).

p. 117. *Hæmatospiza sipahi*. I cannot confirm that the female has a much shorter tail than the male as stated. I measure them as follows, ♂ 67-75, ♀ 66-5-71, a tail of 55 mm. is surely not fully grown ?

p. 122. *Propasser*. Here again it seems doubtful if this genus can be kept distinct from *Carpodacus* though it might be more convenient to do so. *P. rhodochlamys grandis* has the supercilium of a *Propasser* and the wing proportion of a *Carpodacus* ; again in *Carpodacus macgregori* and *trifasciatus* the proportion between the tarsal length and wing-tip length is equal, thus bridging the distinction.

p. 124. *P. thura blythi*. If *Propasser* and *Carpodacus* are both recognized then *blythi* cannot be used for this bird as it is antedated by *Propasser frontalis* of Blyth which is *not* set aside by *Fringilla frontalis* of Say = *Carpodacus frontalis*. If the two genera are merged into one *then blythi is* the correct name.

p. 129. *P. rodochrous* and *rodopeplus*. Surely these names must be spelt '*rh*' ? as all names should be which are derived from the Greek *rhodos*, a rose. Even if Vigors misspelt them originally a correction is provided for in Rule 19 of the International Rules—' errors of transcription, orthography, etc.'

p. 134. *Carpodacus*. If ' *Carpodacus* is now often incorporated with *Propasser* ' it is quite wrong to do so as *Carpodacus* is much the older genus. However perhaps exactly the opposite is intended.

p. 137. *Carpodacus erythrinus roseatus*. This name should date from Blyth (ex Tickell) *J.A.S.B.*, 1842, p. 461. Calcutta.

pp. 134-7. *Carpodacus erythrinus*. There is considerable difficulty in recognizing three races of this bird. We have in Northern Asia and Russia a bird in which in the male shows less red on the back and underparts and a female and immature with less streaks on flanks and abdomen than the Himalayan bird. These two races are perfectly recognizable and most individuals can be picked out. Over the huge intermediate area Asia Minor, Caucasus, Turkestan we find an intermediate bird which in many specimens exhibits more red than the northern birds but less than in the Himalayan ; these have been named *kubanensis*. It is a very poor race as so many cannot be placed; thus I have examined spring birds from Kashmir, Ladak, Asia Minor, Tianshan, Tishkan, Kandahar, Gilgit, Pamir, N.W.F.P. and Samar-

khand which can easily be matched with birds from Himalaya; on the other hand others from Tianshan, Dharkend, Ladak, Gilgit and even Sikkim are intermediate and quite like Caucasus birds. In winter it is hopeless to try and differentiate this third race as the pink colour is so overlaid that it is not possible to say that any particular birds are less rosy than Himalayan ones or not.

p. 138. *Carpodacus rubicilla rubicilloides*. This bird is *not* a race of *rubicilla*—as Prof. Sushkin pointed out some time ago—but should stand as a species (with two recently described sub-species *lucifer* and *lapersonnei*) while *severtzovi is* a race *rubicilla*. The *rubicilloides* group are more heavily streaked on the upper parts and have a relatively longer 5th primary; the *rubicilla* group have the upper parts but faintly streaked and a relatively shorter 5th primary.

Mr. Whistler's notes (*B.N.H.S.J.*, xxx, pp. 186-7) certainly do not, so far as his own records go, apply to *rubicilloides*, as suggested, but quite correctly to *severtzovi* as stated by him and borne out by his specimens. The records he quotes could doubtless in many cases be verified or not by reference to specimens in the British Museum.

p. 140. *Erythrospiza*. This, as pointed out years ago by Salvadori in *Second Yarkhand Mission Aves*, p. 36 and others, and again more recently, is a synonym of *Carpodacus*; *Buchanetes* is the correct generic name.

p. 142. *Erythrospiza mongolica*. Baluchistan is included in the breeding range of this bird. It may breed there though I know of no proof; it occurs there in winter and up till April. Of its wintering in Sind I have no record, nor has Mr. Whistler for the Punjab; nor are there any specimens in the British Museum from anywhere in the plains of India.

p. 145. *Rhodopechys sanguinea*. Does this finch really occur in Baluchistan? I know of no instance of it. As there seems to be but one record of it—Khagan Valley—within our limits and that a 'sight record' perhaps Hazara was intended instead of Baluchistan. One 'sight record' seems extremely slender evidence for including any species in a work like the Fauna.

p. 150. *Carduelis c. major*. I cannot trace this doubtful record from Ziarat but Col. Meinertzhagen certainly obtained a specimen and saw another with it at Quetta on February 27. (Ibis., 1920, p. 138).

p. 152. *Carduelis caniceps subuluta*. I have elsewhere (*B.N.H.S.J.*, xxxi, p. 4) gone in to the question of races of the Himalayan Goldfinch; my conclusions were that *subulata* (= *orientalis*) seems distinct, large and pale, from *paropanisi*, darker and smaller, but the latter is not distinct from *subcaniceps* of Zarudny.

p. 155. *Acanthis cannabina fringillirostris*. Erroneous records are indeed hard to eliminate! This Linnet from 'Daotupper, Sind' is the one Murray said his collector got at Daulatpur in Sind and gave to Hume in whose collection it reached the British Museum. I have already shown (Ibis., 1922, p. 648) that the specimen in question came from Bushire in Persia.

p. 156. *Acanthis f. brevirostris*. This race was described from Erzeroum and it is exceedingly unlikely that it breeds in N. Ladak surrounded as it is by other races, viz. *rufostrigata*, *montanella* and *pamirensis*, nor does *brevirostris* apparently breed in Tianshan, it being confined to Armenia Caucasus and N. W. Persia. It would have been better to have omitted this race especially as the inclusion rests on reputed eggs apparently without parents—a very questionable mode of identification. Recently two other races have been described *ladacensis* from Ladak, and *baltistanicus* from Baltistan (on a single male!).

p. 166. *Gymnoris*. 'Like the true Sparrows it has an autumnal moult.' There is no point in this statement (repeated again on p. 185); that is, it would apply equally to almost *all* Passerine birds. The point is that like the true Sparrows the *juvenile* has a *complete* autumnal moult. It is only half true to say that the 'young are less downy than those of the true Finches' as the young of *Gymnoris* has *no down at all*, as obtains also in *Passer*.

p. 171. *Passer d. indicus*. I long ago pointed out that the House Sparrow of Mesopotamia and S.W. Persia, though recorded by older authors as *indicus* is really *biblicus* (*B.N.H.S.J.* 1921, p. 218).

p. 172. *Passer d. confucius*. If the House-Sparrow of Burma and S. India are the same, this name cannot be used. In 1838 Burton (*Cat. B. Mus. Fort Pitt Chatham*, p. 23) named Latham's Black-throated Finch *Pyrgita nigricollis*. Latham described a House Sparrow in fresh autumn plumage? or else faded? under this name and Burton's only specimens came from S. India. This race should be called therefore *Passer domesticus nigricollis*.

p. 174. *Passer pyrrhonotus*. There is a distinct difference in sex measurement here and the range of measurement given for wings is not wide enough. W. ♂. 67–71, ♀ 63·5–66 in a large series measured.

p. 175. *Passer hispaniolensis transcaspicus*. This bird apparently does not breed in British Baluchistan though it is said to do so in Persia north of Bampur.

p. 177. *Passer montanus montanus*. The inclusion of the typical race in the Indian Fauna rests on two specimens obtained by Whitehead in the N.W.F P. and are in the British Museum. They are decidedly paler than the typical race, month for month, and they are not so pale certainly as *fresh moulted dilutus* from Kashgar, but then one can hardly compare these with the two birds in question which were obtained in February and March. Baluchi birds seem quite the same as these birds of Whitehead's and I certainly should not at present separate them from *dilutus*.

p. 180. *Passer rutilans*. This is rather a difficult group and the arrangement here given does not seem quite satisfactory though I agree that four races are recognizable.

Passer rutilans cinnamomeus. Hartert created one difficulty in restricting 'the Himalayas' of Gould's type locality to Bhutan. Gould described the bird in 1835 at a date when no specimens of birds had been received from Bhutan and so his bird could never have come thence; moreover Gould says his bird (a male) had a wing of $2\frac{3}{4}$ inches = 70 mm. and however carelessly one may measure a Bhutan or East Himalayan male one cannot make it as small as 70 mm.; a bird of this size could only have come from the N. W. Himalayas. The measurements of males from Bhutan, Bhutan Duars, Sikkim, Native Sikkim, S. Tibet and Nepal are the same and are W. 75–81. (27 measured).

Passer rutilans debilis. From Kumaon to Kashmir the Cinnamon Sparrow is represented by a race which only constantly differs from the eastern bird in being smaller, an exception to the almost invariable rule that where there is difference in size the western birds are largest. The explanation is, I think, that the breeding quarters of the eastern bird are Southern Tibet and probably the higher parts of Sikkim and Bhutan and we know that Tibetan birds of many species tend to be larger than Himalayan. In British Sikkim it apparently does not breed (Macintosh, Stevens;). The paleness and more yellow on the underparts of the western bird is largely individual variation, birds quite as pale and as yellow being found in the east. Wings of males Kumaon to Kashmir 70–74 mm. (35 measured).

Passer rutilans intensior. This bird was described from W. Yunnan and 15 males thence measure 69–75 mm. The males and females are rather darker than Himalayan birds. Equally dark are the Burma birds (S. Shan, Chin and Karenni Hills. ♂ W. 71·5–72 (4 specimens). Manipur Hills, ♂ W. 68·5–71·5 (9 specimens); Shillong, ♂70–74·5 (7 specimens); Naga Hills, 70–73·5 (2 specimens); Miri Hills, 71·5 (1 specimen) all these are small and within the range of *intensior* and like the latter are darker in both sexes (more easily seen in females) than East Himalayan birds and therefore I should extend the range of *intensior* to the hills of Assam. Certainly one cannot, as Mr. Baker suggests, put the small dark Manipur birds with the much larger paler Tibetan ones.

p. 187. *Montifringilla n. alpicola*. It may of course be useful to include birds in the Indian list before they have been recorded but if this plan is adopted one can hardly see where one should draw the line. This bird seems to be included on the rather slender grounds that it was the form 'almost certainly seen by Whitehead in Chitral'—hardly satisfactory evidence for an authoritative work.

pp. 197–8. *Emberiza s. pallidior*. Wintering . . . to *North-east* India, surely North-west is meant? It extends in winter far beyond the N.W. Province Frontiers to the riverain of the Punjab and Sind.

p. 200. *Emberiza f. arcuata*. In this Bunting and in *E. pusilla* the tail feathers are narrower and more pointed at the tips than in most others, a character I do not recall having been noticed before.

p. 201. *Emberiza pusilla*. Here and in many other cases throughout the Fauna the adult plumage in summer, habits in summer, nidification are described at some length while little is said about the winter habits and plumage. It may be a matter of opinion, but it would seem to be more useful to give prominence to the *Indian* aspect of birds which are purely winter visitors.

p. 207. *Emberiza c. godlewskii.* It seems more reasonable to consider *cia* and *godlewskii* as two species and not races of one since both are represented by separate races in Tian Shan ; nor is there any intergrading. The type locality of *godlewskii* is Kultuk in South Baikal. In view of the numerous races of *godlewskii* which have been described a re-examination of Indian material is desirable. The Tibetan bird has been described as *khamensis*, Sushkin.

p. 208. *Emberiza huttoni.* I must entirely disagree with the use of this name for this Bunting. Blyth described it as *Emberiza buchanani* from Buchanan Hamilton's drawings and the description is unmistakable (*J.A.S.B.*, xiii, p. 957, 1844). He says ' probably = *Emberiza hortulana apud Sykes* '. He described the bird again (xviii, p. 811, 1849) as *E. huttoni* apparently thinking he had made a mistake before, for in a footnote he says ' *E. buchanani nobis* = *E. hortulana* L.'. In Blyth's own copy of the *J.A.S.B.* Blyth wrote against this footnote ' No ' showing that he realized later that he was correct in the first instance and that his *buchanani* was *not* the Ortolan of Linneus, as indeed it could not be by the description. Moreover no author can go back on his own names if the descriptions hold good.

p. 214. *Emberiza melanocephala.* This bird does not breed in British Baluchistan so far as is known ; perhaps parts of Persia are included and meant here.

p. 215. *Emberiza icterica.* The distribution of this bird needs amending, the summer and winter ranges are not differentiated at all. Mesopotamia is included in the range whence there is but one record.

p. 219. *Emberiza calandra.* This bird has not only been *recorded* from Jhang in the Punjab but both Mr. Whistler and myself *obtained* it there ; his specimen is in his collection and mine I presented to our Society's Museum. I mention this because our records seem to be put on a par with Murray's Sind bird which as I pointed out before (Ibis., 1922, p. 656) did not come from Sind at all but from Bushire in Persia, and one would think the ' record ' need not have been resuscitated in a work like the Fauna.

pp. 219-220. *Emberiza citrinella erythrogenys.* Over a page is devoted to this species, yet its distribution in India has been entirely omitted ! Has it ever occurred in India at all ? I know of no record.

p. 226. *Delichon urbica urbica.* A good series of breeding birds from India are most desirable ; all that I have seen are shorter winged birds than most of the typical race and I feel doubtful if the Indian birds belongs to the typical race. Surely it is not a common winter visitor to N. W. India ! ? Mr. Whistler obtained two specimens in 16 years in the Punjab and *only saw it occasionally on passage* to and from the hills.

p. 228. *Delichon u. cashmeriensis.* This is most certainly to my mind *not* a race of *urbica* but a separate species. Not only do both breed close together in Ladak but they do not intergrade anywhere. Moreover the tail is much more deeply forked in *urbica* and the proportions of tail to wing are quite different in the two ; viz. :—1 to 2 in *cashmeriensis*, 1 to 1·6 in *urbica* ; on such differences other species have been put into different genera !

p. 233. *Riparia riparia subsoccata.* When I described this bird as *R. r. indica* I went pretty thoroughly into any possible names already available. It is true that Jerdon's *subsoccata* refers to this Sand Martin but Jerdon who did not know the bird quotes what Adams said about it. The latter described the bird well and was the first to do so (*P. Z. S.*, 1859, p. 176) under the title *Cotile subsoccata* Hodgson ? Unfortunately however Horsfield and Moore in their Catalogue (i, p. 96) in 1854 had already used up Hodgson's *nomen nudum* by quoting it as a synonym of *sinensis*, therefore *subsoccata* cannot be used for any other species.

p 234. *Riparia r. ijimæ.* Under nidification this species is referred to by some curious slip as ' these little *Swifts* '!

p. 239. *Ptyonoprogne obsoleta obsoleta.* I too in the ' Birds of Sind' made the mistake of uniting the Indian and Egyptian bird and this I have (*B.N.H. S.J.*, xxxi, p. 4) since rectified. At the time I was working at them there was not sufficient material from Egypt available to me in the same state of plumage as the Sind birds. Since then however I have obtained a comparable series from Egypt, and Sind winter birds are distinctly *darker* than winter Egyptian ones ; unfortunately however they must bear the name *pallida* of Hume.

p. 240. *Hirundo rustica rustica.* I cannot verify these wing measurements at all ; surely no full winged adult has a wing so small as 110 mm. ? I measure a fair series of adults, ♂ 124·5–132, ♀ 120–126. (W. Europe).

As regards the distribution of *rustica* and *gutturalis*, I shall confine my remarks to N. W. Indian birds. In the first place *gutturalis* is an eastern bird described from a winter bird in the Philippines and the breeding range of it is extensive over N. E. Asia. Now a series of adults from winter quarters—Philippines, Java, Sumatra, Malay (which may be taken as a topo-typical series and are the same as the N. E. Asiatic birds) present the following characters compared with W. European *rustica.*

1. Wing smaller, ♂♀ 109–120, mostly under 118 (25 measured).
2. Under parts variable ; some whitish, some pinkish.
3. Red of throat and forehead deeper on the average.
4. Pectoral band variable ; broken in some, in others smudged (i.e.) tips of some of the feathers in centre of band chestnut but band not broken. Now taking these characters separately ; wing length is a good character there being but a small number which overlap ; underparts—no guide at all ; all over the range of *rustica* one may find birds with white or with pinkish underparts and every intermediate; deepness of chestnut red colour is an *average* distinction only ; the pectoral band in *rustica* is never, I think, completely broken but 'smudged' bands are *often* seen so that this character is good only when the band is broken.

Now breeding birds from Cashmere, Gilgit, Yarkhand and winter birds from Sind, Punjab and Beluchistan are all large birds, wing ♂ ♀118, 119, 120–129 (25 measured) ; most have the band unbroken and some have it smudged but in none is it completely interrupted. I therefore consider all to be *rustica* and *gutturalis* not to occur in N. W. India at all.

p. 242. *Hirundo rustica tytleri.* The type locality was fixed by Jerdon as Dacca ; if Oberholser also fixed it as Dacca it was a fortunate though needless act !

p. 245. *Hirundo smithi filifera.* This I think is a recognizable race though Mr. Baker hardly thinks so ; the wing measurements may overlap but in measurement of the tail wires, I found only one overlap in 28.

Surely in this case the 'nestlings' and 'young birds' described are one and the same states of plumage ? that is to say, the juvenile plumage in which it leaves the nest and which it retains till it moults to adult dress, as with other Swallows.

p. 248. *Hirundo daurica daurica.* This bird seems scarce in collections ; in the British Museum and Tring Museum I find 21 specimens some of which are not sexed ; the wing measurements are ♂ 127–133, ♀ 122–128–131. The statement that this race breeds in Shillong is not borne out by any specimens. I have seen four specimens taken within Indian limits :—♀ Sadiya, June 3 ; ♀ Sadiya, June 8 (type of Hume's *intermedia ;* one Cachar, no date, in moult and so obviously not breeding ; ♀ Cachar May (this bird seems to have a smaller bill than typical *daurica*) *;* as we are told that it does not arrive in Shillong till late in July all the above birds in May and June may have been on passage for further north. That it should breed in Shillong would be very remarkable as the nearest breeding quarters are many hundreds of miles to the north, moreover in Shillong another race (*striolata*) certainly breeds. A few breeding specimens would be desirable.

p. 249. *Hirundo daurica striolata.* A series from the Southern Shan States, apparently breeding, are all large birds, W. 127–136, but there do occur small birds which seem to only differ in being small ; thus a male from Cachar. W, 126 is 'type 2' of Hume's *substriolata* and another ♂ Manipur, W. 120, is exactly like it but may be this has been sexed wrongly. Here again there seems to be great lack of breeding and of sexed specimens. It would appear to breed in Central Formosa (specimens May and June) and perhaps Luzon and Lombok ? (specimens July). The juvenile is distinctly heavier streaked below than the juvenile of *nepalensis.*

p. 250. *Hirundo daurica nepalensis.* This is perhaps the most difficult of a puzzling group and I have examined and measured every adult bird in the British and Tring Museums besides all in Mr. Whistler's collection, 102 specimens in all.

Adult. 1. Himalayas, east to Nepal; 25 specimens, ♂ wing 111–117, odd ones 119 and 120, ♀ 110–116.

2. Assam, Burma, Yunnan, 30 specimens, ♂♀ 116–125. Yunnan (Talit) May 21 and Mekong-Yangzte Divide June 5 are the only two which are possibly breeding birds.

3. China. 9 specimens, May to August, ♂♀ 112–124·5 from Shanghai, Chihli, Shantung, Kuangtung Provinces.

18 specimens, September to April, ♂♀ 114–124·5 from Shanghai, Chihli, Fokien, Kwangtung, Kwangsi Provinces.

Of these 27 specimens only 4 are under 115.

4. Japan. 7 Specimens, ♂♀ 117–124.

5. Corea and Manchuria, 9 specimens. ♂♀ 117–125. April and July.

6. Afghanistan, 3 specimens, 113–116. Pushut and Byan Khel.

It will be seen from this that topotypical *nepalensis* from the Himalayas are smaller birds than those from China, Japan, etc. and *on the whole* they are less coarsely streaked. The collar on the hind neck varies much ; in the types of *nepalensis* the collar is unbroken but I do not think this is constant for Himalayan birds ; in Chinese birds it always seems to be broken. In Assam, Burma and the plains of India one finds some birds are larger than the Himalayan breeding birds but since these are winter visitors they may not have come from the Himalayas A series of breeding birds from Manchuria are quite strikingly different to a similar series from the Himalayas and though every bird from China and Japan are not to be picked out from Himalayan birds I think that as a race they should be recognized and the name for them will be *Hirundo daurica japonica* of Tem. and Schl. As all Chinese and Japanese birds seem quite the same ; *Hirundo arctivitta*, Swinhoe described from Pekin (4 examined, only one adult) is not different to *japonica*.

The three birds from Afghanistan are *not nepalensis*, they have hardly any striæ on the underparts and seem quite like *rufula* but are smaller than this race. Further material is desirable ; if it should turn out to be a recognizable race the name *H scullii* cannot be used for it. It was said in the description of this that it occurred in Gilgit and Nepal but the type in Seebohm's collections was obtained by Scully in ' the Residency grounds in Nepal ' (*vide* B. M. Cat.) and therefore *scullii* must be a pure synonym of *nepalensis*. In the Ibis, 1916, p. 71 I identified some birds of Mr. Whistler's from Jhelum as *scullii*, but *nepalensis* is of course the older name.

p. 252. *Hirundo daurica rufula*. I think I am correct in saying that Mr. Whistler certainly never found this race breeding in the Kangra Valley, and certainly no specimens in his collection refer to this race. The mistake arose (*B.N.H.S.J.*, xxi, p. 659) through this bird being identified as *scullii* and Mr Whistler's remarks that this ' apparently corresponds to *Fauna of B.I.* No. 824, *H. rufula*.' The bird in question is *nepalensis*.

p. 251. *Hirundo daurica erythopygia*. There is much yet to be learnt about the distribution of this race in the Himalayas. In some places it ascends to over 4,000 ft. and breeds in same area as *nepalensis ;* it requires very detailed study. The distribution in the plains of India is hardly as wide as is given, as it is practically absent over a very large part of the Punjab and Sind. In the description this race is compared with *striolata* and *daurica* but size alone will differentiate it from these two as the measurements do not overlap ; moreover it does not occur in the same area. It is from *nepalensis* that it needs to be distinguished ; chestnut colour is darker and on the rump does not pale off so much as in *nepalensis*, the exposed black of the undertail coverts is not so extensive—10 to 16 mm. as against 15–25 in *nepalensis ;* and besides having a shorter tail, as pointed out, the fork of the tail is consequently not so deep—from the tip of the centrals to the tip of the laterals in *erythropygia* is 30–37 mm, whereas in *nepalensis* it is 40–50 mm. Wing length is not so diagnostic, *erythropygia* mostly 105–113, *nepalensis* 111–117 ; I cannot find any adult *erythropygia* with a tail as short as 65, I measure ♂ 76–83 ♀ 72–78, in a long series. In the juvenile the rump is distinctly darker than in *nepalensis*, in fact in the latter when worn it is not darker than cream-coloured.

p. 256. *Motacilla alba*. The difference in wing length between *alba* and *dukhunensis* has not been stressed *alba*, ♂ 88–92·5, ♀ 84–88·5, *dukhunensis*, ♂ 91–96, ♀ 84–91. These measurements, taken from W. Europe and from Yenesay specimens, may be useful to distinguish doubtful specimens.

p. 258. *Motacilla a. persica*. Unless an adult male of this race has been found in India, it is best omitted from the Indian list as it is most unlikely to occur ; so far as we know it is quite resident in its range and that it should

migrate hundreds of miles eastward would be quite a new fact which only ought to be recorded on incontravertible evidence. *Persica* is rather paler on the back than *personata* and slightly smaller, and has a longer bill than *dukhunensis*.

p. 261. *Motacilla lugubris*. Surely the correct name is *M. yarrelli* as pointed out by Newton and others years ago ? ; *lugubris* of Temminck was quite indeterminable. In any case if one follows Mr. Baker in considering *maderaspatensis* a race of this group, and not a species in itself as I do, then the latter name must be used for the group as it is many years older.

Any one who wishes to identify any but the adult males of *alboides* and *personata* will find some help in *J. B. N. H. S.*, xxviii, p. 1089 where I went rather fully into the question, and also into the reason for considering *maderaspatensis*, a species of itself.

p. 265. *Motacilla cinerea*. The tail length is given as 75 mm. ; it should be 95. This mistake is repeated on page 266 where the tail length 67-73 should be 87-93.

The down of *M. c. caspica* is dirty white.

p. 267. *Motacilla flava*. Further details of the plumages of *beema* and *thunbergi* will be found (op. cit., p. 1087) and also the distinguishing characters of the male of *Motacilla flava simillima* which has been omitted altogether in the Fauna. The only Indian example of *leucocephala* was obtained by Mr. Whistler at Jhelum ; for first occurrences it is surely of interest to give full data.

p 271. *Motacilla feldegg*. More details on the plumages of both races will be found in op cit., p. 1086. Mr. Baker says the young (= 1st winter) of *feldegg* have no trace of a supercilium if that is so they should be quite easily distinguished from first winter *melanogriseus* which has a well-marked whitish or buffish white supercilium as I pointed out (*loc. cit*).

Some few adults which occur in India may not be separable from *feldegg*, the vast majority I think are undoubtedly *melanogriseus*. The Shiraz breeding bird is quite certainly *M. f. feldegg* (series of breeding birds examined) and not *melanogriseus* as Mr. Baker states nor did Mr. Witherby ever record them as *melanogriseus*.

p. 273. *Motacilla citreola*. I went very carefully into the question of the plumages of both sexes and of all ages in *citreola* and *calcarata* (op. cit., p. 1084) and to this I must refer all who wish to distinguish them as only a very small percentage could be differentiated by the descriptions given in the Fauna. I also pointed out that *calcarata* has the longer tarsus whereas Mr. Baker gives *citreola* the longer. I do not think he is right. The combined measurement of tarsus, middle toe and claw in *citreola* is usually well under 47 mm. and in *calcarata* well over 47 mm.

Although not alluded to, it was pointed out by Prof. Shushkin (*Proc. Boston. Soc.*, August 1925) that *M c. weræ* from S. E. Russia and Turkestan is a recognizable race in that it is smaller (♂ W 77–85) and is less grey on the flanks and this is the form found in N. W. India in winter whereas the Bengal, Assam, and Burma birds belong to the typical race *citreola* from E. Siberia (♂ W 88–93) see also *Bull. B. O. C.* xlvi, p 114.

p. 276. *Dendronanthus indicus*. Distribution. In winter south to India *east*, not west, of a line from Sutlej Valley to Gulf of Cambay.

p. 278. Genus *Anthus*. To say that ' the difference in plumage in summer and winter is negligible ' is rather an astounding statement ; one could hardly find more different looking birds than say winter and summer *blakistoni* or *japonicus* or again winter and summer *cervinus*.

p. 279. *Anthus trivialis trivialis*. The type locality should be *Sweden*, not Switzerland.

p. 281. *Anthus hodgsoni hodgsoni*. The winter distribution given is far too sweeping. There are enormous stretches of N. W. India where it is not found in winter as I pointed out in *Ibis*. 1923, p. 7.

This species is highly variable and one may see birds obtained at the same place and same time of year which look utterly different ; some have the upper parts heavily spotted others have hardly a spot ; such birds I have seen from Sikkim in August and from the plains in winter. *Berezowskii* does not seem to be a recognizable race at all ; Kansu birds in worn dress of course have lost the green of the upper parts but so have Himalayan ones. Spring birds from Kansu and China, etc., are not different to Himalayan ones ; they do not appear to me to be darker. *Yunnanensis* is only recognizable in a series in fresh autumn plumage when on the whole the upper parts are darker ; in breeding

dress a series from Yunnan do not seem to be separable from a similar series from the Himalayas; a poor race.

p. 287. *Anthus sordidus decaptus*. Sind is apparently included in the breeding range of this bird; it is only known as a winter visitor there. Besides size, this race differs from *A. s. captus* in being less pale and grey above in fresh plumage.

p. 289. *Anthus richardi godlewskii*. It is quite true that *striolatus* of Blyth cannot be used for this bird as in some unaccountable way (? from Blyth's MS.) Gray quoted Blyth's name as a synonym of *rufescens* in the year before Blyth ever published his name. But by the same interpretation of the rules of nomenclature *Anthus thermophilus* of Jerdon must be used for this bird as in the *Birds of India*, p. 233. 1863, Jerdon uses Hodgson's *nomen nudum* as a synonym of *striolatus* with description. This bird must then be called *Anthus richardi thermophilus*, Jerdon, ex Hodgson. Type locality Nepal. The distribution given is too sweeping; this bird does not occur over the greater part of N. W. India at all.

p. 291. *Anthus richardi rufulus*. I feel very doubtful if *rufulus* is a race of *richardi*; it appears to me to be more probable that it is a species which itself has many races both in the Oriental and Ethiopian regions. The form of this bird which occurs in Ceylon is certainly *not* the same as inhabits Bengal and N. India generally; it is a much darker bird and I cannot separate it from *malayensis* and so should extend the range of that race to Ceylon.

p. 292. *Anthus campestris campestris*. The Tawny Pipit, is a common bird in N. W. India in winter and Mr. Whistler and I have a very large series from Sind and the Punjab. Not a single specimen belongs to the typical race, yet from the distribution given one may infer that it is common. I cannot credit it and from the breeding distribution of the race one would hardly expect it to be.

The wing measurements given are misleading and must apply largely to females, as I measure a series of males as 91–98·5 mm.

p. 293. *Anthus campestris griseus*. This was described in 1920, not 1923. Here again the measurements given can only apply to females; a large series of males measure W 89–95, T 71–76. The habits of this bird in India have been recorded by me (Ibis., 1923, p. 7).

p. 294. *Anthus cervinus*. The red head and throat is certainly acquired before the third year. I have examined specimens moulting into the red dress in the first spring and this is probably normal, whether they then get redder and more immaculate with age is speculation.

p. 296. *Anthus roseatus*. Habits. It is unfortunate that in so many cases so little space is devoted to habits. In this species the habits in the breeding season only are briefly referred to. The habits in winter have been recorded over and over again by Indian writers and are so utterly different to the breeding habits that some mention might have been made of them. But we are told only that the habits are ' those of the genus.' It is not at all clear what is meant by this statement which is repeated again under Tawny Pipit and one of the Water Pipits. No description of the habits of the genus is given under the genus *Anthus* and as several of the species have entirely different habits to refer to any one species has having the ' habits of the genus ' seems meaningless.

pp. 297–8. *Anthus spinoletta*. The two races *coutelli* and *blakistoni* are not very satisfactory at least as regards winter birds; so many are intermediate between what may be called typical specimens of the two races and as stated we know so little about the breeding ranges of both races. Probably both have a very large range and intergradation is found. *Coutelli* certainly breeds on the Persian plateau.

The winter habits of *coutelli* have surely been recorded ? it is one of the commonest birds in the Nile delta. I have measured a large series of topotypes of these two races and could find no difference at all in measurements (cf. *B.N.H.S.J.*, xxviii, p. 229). It would have been more helpful I think to have given the winter plumage of *coutelli* as summer plumaged birds in India must be very rarely met with, moreover the description of *blakistoni* is compared with *winter coutelli*.

p. 309. *Otocoris alpestris longirostris*. Spiti, Lahul, and Kulu should be added to the distribution of the race. *Elwesi* reaches as far west as the Tso Kar, Tso Moriri and Pangong Lakes in Ladak and north to Aktagh north of the Karakoram Pass that is to say to long. 78°E. The rest of Ladak, except

the Deosai plain whence a recently described race comes, is inhabited so far as is known by *longirostris*. Baluchistan however would seem to be outside the range of this latter bird ; I know of no record within the boundaries.

p. 313. *Melanocorypha bimaculata*. This bird does not so far as is known breed in British Baluchistan.

p. 315. *Alauda arvensis dulcivox*. This bird does *not* breed in Baluchistan. The Skylark breeding at Quetta recorded by Marshall and others is a *gulgula*. Whitehead never recorded an *arvensis* breeding on the Afghan Frontier ; he expressly states that *arvensis* was a winter visitor there and the breeding bird is a *gulgula*, as might be expected. As he well knew the difference between the two birds he probably was not mistaken. The Persian breeding bird is *Alauda arvensis schach* which seems to be perfectly recognizable and nothing like *dulcivox*.

p. 319. *Alauda gulgula gulgula*. Wing measurements of races of Skylarks which do not give measurements for each sex are of little value as there is a considerable difference between male and female. In this case the measurements given 82–92 can surely only apply to females ? as a series of males measure 92–97 mm.

p. 321. *Alauda g. cælivox*. *For* ' Distribution ' *read* ' Description.'

p. 324. *Calendrella brachydactyla brachydactyla*. The Short-toed Larks are admittedly difficult birds to place as they vary a good deal but it appears to me that the typical race has been dragged into the Indian list on somewhat, slender grounds though the erroneous breeding distribution given makes its inclusion look quite possible. The bird which breeds in Palestine is *hermoniensis* as also are the few Persian birds I have seen. No form of *brachydactyla* breeds in British Baluchistan so far as we know. Where then do the supposed examples of the typical race found in winter in India come from ? I can hardly credit that they migrate from South Europe. I think the truth is that we have in this group a species which varies slightly in colour according to the ground it inhabits in the breeding season and that though the prevailing tone of colour of the central Asiatic birds (*longipennis*) is paler and greyer, yet over this area there will be found some which are browner and redder and resemble the European bird and these are the ones which pass as the typical race in India. If we are to maintain these three races at all I think this is the most reasonable explanation and not to imply that European birds migrate to India in winter. These browner Asiatic birds were apparently given a name *C. b. orientalis* in 1925 by Sushkin.

p. 326. *Calandrella b. dukhunensis*. This race largely replaces *longipennis* in Central and Eastern India. The more rufous upper parts and the tawny tinge on the pectoral band and flanks coupled with a slightly longer wing and bill differentiate the vast majority. In the British Museum there is a fair series of these but some so labelled do not, I consider, belong to this race. The wing measurement ranges from 95 in small females to 104 in males ; I find none so small as 90 mm. as stated. There are no specimens *west* of Etawah and Mhow nor are there any specimens from Karachi. Sind and the Punjab lie outside the range of this bird.

p. 327. *Calandrella acutirostris acutirostris*. The breeding range must certainly be extended to British Baluchistan and probably to Afghanistan. I cannot separate a sufficient number of *tibetanus* to justify its recognition ; the amount of white in the tail varies very much and so does the colour of the upper parts.

p. 329. *Alaudula*. It is of course a matter of opinion whether such characters as shortness of inner secondaries and slenderness of bill constitute grounds for generic separation. However in this case slenderness of bill surely does not hold good as *persica* has a stouter bill than some *Calandrella*.

p. 331. *Alaudula raytal adamsi*. The wing measurements of this bird reach as correctly stated 88 mm., but as this is so it upsets the key to the species on page 329 where birds with wings over 85 are referred to *rufescens*.

p. 332. *Alaudula rufescens persica*. The wing measurements given are too small, none out of a large series I have measured is so small as 86 ; 94 I found to be the minimum. It is not clear what the locality of the supposed eggs taken by Barnes is. Peshawar is not in Afghanistan ; perhaps in Afghanistan near Peshawar is meant or possibly Peshawaren on the Helmund ? but if Barnes did not get the breeding birds surely no value can be attached to this record ? It is however not correct to say there is nothing on record about the breeding of *persica* as it has been fairly well described by Blanford (*Eastern Persia*, ii, p. 243)

under the name of *Calandrella pispoletta*; Blanford's breeding birds obtained and so recorded were *persica* (examined by me). This race has occurred at Sirsa in Punjab in winter but not I think in Sind—at least I have been unable to find any examples thence in the British Museum.

p. 333. *Alaudula rufescens seebohmi*. In addition this race has occurred at Sirsa in Punjab (Hume coll.) and in N. Baluchistan (Meinertzhagen).

p. 333. *Mirafra*. The wing has surely 10 primaries; by a slip it is said to have two!

p. 344. *Galerida cristata chendoola*. I should certainly expect the breeding birds at 7,000 feet in the N.W.F.P. to be *magna* and not *chendoola* as also obtains in N. Baluchistan and I have no recollection of ever saying nor I can find that I have ever recorded the exact opposite, as Mr Baker avers. Mr. Baker is not correct in saying that this species never perches on bushes or elevated positions. I have seen it sitting on the top of tall euphorbias and on telegraph wires on innumerable occasions as I recorded, Ibis. 1923, p. 18 and *B.N.H.S.J.*, xxviii, p 226, for *magna*.

p. 349. *Ammomanes*. There is a muddle over the proportions of the primaries in the introduction to the genus. Obviously the first primary cannot be one-third the length of the second and the latter 6 mm. *shorter than the first!*

p. 350. *Ammomanes phœnicura phœnicura*. Distribution given should be *east* of a line drawn from Rann of Cutch to Delhi, *not west* of it.

p. 351. *Ammomanes phœnicura zarudnyi*. This bird has also occurred in Sind, a fact I was not aware of when I wrote the *Birds of Sind*. I have however since found a bird in Tring Museum obtained by Blanford on December 21, 1875, near Sehwan; he had passed it over as an immature of *phœnicuroides*. Status in Sind not known; elevational migrant from Kelat? or possibly resident?

pp. 353–4. *Pyrrhulauda grisea*. The bird inhabiting the dry plains of N. W. India is easily separable from the South Indian bird. I described it as *P. g. siccata* (*Bull. B. O. C.* ccxcv, March 1925). Mr. Baker has omitted all reference to this though the Bulletins of May and October 1925 are quoted for other species.

p. 353. *Zosterops*. The grouping of this difficult genus did not seem very satisfactory nor in accord with my experience and I have recently gone into this group and some of the results are given in the *Bull. B. O. C.* xlvii, February 1927. For those who have not seen this I will repeat the main points and add a few others.

Zosterops palpebrosa. There is no doubt that Temminck described the Bengal bird, and probably from near Calcutta, and this is the darker, greener type as opposed to the paler, more yellowish bird found over N. W. India, etc. This latter Mr. Baker has recognized but unfortunately he described the yellower bird (*elwesi*) as being smaller and placed the type locality of it as Sikkim. However there is not the slightest doubt that the Sikkim and Bengal birds are the same and therefore *elwesi* is synonym of *palpebrosa*, they are of the same colour and have the same measurements:—

Bengal, W. 49–55, B 11·5–13.
Sikkim, W. 49–54, B 11·5–13.

So that the yellower bird which also is *larger*, not smaller, still lacked a name and for it I proposed the name *Zosterops palpebrosa occidentis* (*Bull. B. O. C.* xlvii, p. 88). This bird ranges through the Himalayas from the vale of Nepal westward to Kashmir, N.W.F.P., Punjab, Sind (Karachi), W. United Province, Central Province, east to Raipur, Rajputana and Bombay Presidency south to N. Kanara and Mysore. W. 53–59, B 11·5–13.

Mr. Baker has separated the Assam bird as *cacharensis* and says it is smaller than the typical race and shews a yellow streak down the abdomen. I have examined Mr. Baker's type and a series of topotypes and in all 62 specimens from Assam and I find the abdominal streak or a trace of it in only 22 specimens. This seems hardly constant enough to constitute a recognizable race and moreover it is found in specimens outside Assam, thus quite a number from Sikkim show it also some from Yunnan and from the Nilgiris. The wings of Assam birds measure 49–54·5, quite the same as in *palpebrosa*, and therefore I consider *cacharensis* to be also a synonym *palpebrosa*. The range of the typical form will then be Bengal and Sikkim east to Assam, Kauri, Kachin, N. and N. W. Yunnan, S. Shan States and Karenni. The distribution

south of Bengal still needs working out and there are no specimens for examination from N. Circars and Orissa, Hyderabad State and Madras.

The bird which inhabits the Nilgiri and Palni hills is I consider separable; it is of the same coloration as *palpebrosa* but it is larger in wing and bill I have named this (*loc cit.*) *Zosterops palpebrosa nilgiriensis*, W. 54·5–58, Bill, 13–14; doubtfully separable from this is the Andaman bird but the Nicobar bird *nicobariensis* has also a large stout bill but is smaller in wing, 50–53·5. The Ceylon and Laccadive bird *egregia* is peculiar in being even brighter and yellower above than *occidentis*, as most Ceylon races run to darkness in colour.

In coming to these conclusions I have examined and measured over 300 specimens.

Zosterops simplex. This is the Chinese bird and Mr. Baker recognizes a race of it within our limits—*peguensis*. The series available in the British Museum do not seem to be different to birds from China either in colour or size. There is no doubt that although *simplex* is rather like *palpebrosa* it must at present be considered a species and not a race. Both *appear* to breed over a considerable area in W. Yunnan. The same remarks apply to *aureiventer* which within our limits appears to overlap the ranges of *palpebrosa* and *simplex* in Burma. But there is yet a lot of careful field work and collecting to be done in the areas where two species occur to ascertain their distribution, whether there is any altitudinal difference in habit and whether there is any interbreeding and intergrading.

p. 378. *Æthopyga siparaja seheriæ*. The geographical range of *seheriæ* and *mussooriensis* seems to be entirely a question of east and west, all males from Sikkim and Native Sikkim have short wings (54·5–58 mm.) as have also males from Bhutan, Assam, etc., whereas the western birds are larger (61–62·5 mm.). The difference is small but the variation in wing length of all Sun birds seems to be very little. Nepal birds (*miles*) stand out rather prominently with dull grey underparts with no olive green or only a trace (wing 55–61) and I think this race should be maintained. It seems hardly credible that Hodgson's method of preparing his skins should account, as suggested, for the grey underparts. *Andersoni* with violet crown and tail, instead of green, is, I think, no doubt, a sporadic variety (4 examined from N. Bhamo, Minjin and L. Chindwin). Quite typical *seheriæ* also occurs in Bhamo and Upper Burma (which is omitted in the distribution of *seheriæ*). Violet and green metallic reflections vary in many sunbirds, sometimes geographically and sometimes not, but the wetting of the plumage as suggested by Mr. Baker as the cause in this case has, I am sure, nothing to do with it as I have experimentally proved. The crown of *seheriæ* when wet goes dull but on drying out the original green reflections are restored.

The juvenile of this and of *mussooriensis* is *not* like the female; juvenile male has the throat and chin brick pink, the juvenile female has not but is greyer, not so yellow on the underparts; *otherwise* they are much as in the adult female. Full plumage is assumed by complete moult and this is then held all the year as also in *vigorsi*, the moult taking place in this species (or race?) from March to May in both sexes.

I think Mr. Baker is quite right in rejecting the name *goalpariensis*; the type specimen is certainly labelled as from Dehra Dun, but it is a quite typical *seheriæ* with wing 55 and certainly never came from this locality, as all other specimens thence are quite typical *mussooriensis*. But surely this last race does not reach the Afghan frontier? Dharmsala is the furthest west I can trace it.

p. 383. *Æthopyga ignicauda ignicauda*. Males. wing 58–61. There is not the slightest doubt that this species like *Cinnyris asiatica brevirostris* has a dull winter dress. It is green like the female but the underparts are brighter yellow and often show some odd orange feathers. Tail longer than in the female, outer webs red, centrals not prolonged more than half an inch beyond the rest, otherwise tail as in summer; tail coverts scarlet, rump yellow. Many specimens in this dress in the British Museum are labelled females but by measurements alone they are sexed wrongly. Moult out of this dress starts in February and lasts till April the body plumage, central tail or whole tail, but apparently not the wings, are moulted to the full dress. After breeding the males moult again and assume the above dull dress (specimens in old full dress with the new green feathers 'in pin' examined).

p. 384. *Æthopyga flavescens*. A specimen from the Naga Hills seems to be of this race.

p. 386. *Æthopyga gouldiæ gouldiæ*. Juvenile. Like the female but tail not so graduated, nor tips so white. Complete moult September to December to full dress which is then retained all the year.

p. 387. *Æthopyga dabryi* or as I should call it *Æthopyga gouldiæ dabryi*. Juvenile. Only one seen (unsexed) is like female but tail not so graduated and tips not so whitish ; complete moult January to April (or earlier ?) to full dress which is retained the whole year.

p 388. *Æthopyga saturata*. Juvenile (unsexed) is like female but tail not so graduated and tips not so white. Complete moult to full dress which is then retained all the year. Surely *sanguinipecta* is a race of this ?

p. 391. *Æthopyga nipalensis*. Juvenile (unsexed) is like the female but tail not so graduated and tips not so white ; one, perhaps a male, has an orange wash on the breast which another labelled female lacks. Complete moult to full dress which is then retained all the year.

p. 393. *Leptocoma*. The Sunbirds can be split into almost as many genera as there are species according to the varied ideas of generic distinctions. The type of the genus *Cinnyris* is *C. spendida* (by subsequent designation of Gray) and this bird does not seem to be sufficiently generically distinct from such Sunbirds as *lotenia*, *asiatica* and *osea*. Now *osea* and *asiatica* are so close that the one might almost be considered nothing but a race of the other yet we have an Indian faunist putting *asiatica* in a genus *Leptocoma* and an Ethiopian faunist putting *osea* in the genus *Cinnyris* !

p. 394. *Leptocoma lotenia*. Unlike *asiatica brevirostris*, adults seem to have the metallic dress all the year, moulting September to November. The juvenile has a complete moult in April and May to the adult dress. Is Mr. Wait correct in suggesting that the adult has a distinct winter dress ? (*Birds of Ceylon*, p. 164). I have certainly examined two birds September and November moulting from metallic to metallic dress.

p. 401. *Leptocoma ornata*. There is something wrong with the reference to Lesson. The date I think should be 1826.

p. 421. *Dicæum*. A neuter genus always accentuates the difficulty as to how the specific name should terminate. The International Rules help up to a point as Rule 14 states that the specific name should agree, if an adjective, with generic and Rule 19 states that the author's spelling should be adhered to unless there is an error of orthography, transcription, etc. But the difficulty is to know whether an author intended his name to be an adjective or a substantive and whether therefore there has been an error in orthography or not ; and the difficulty always arises in cases of compounded words. It should be clear I think that where two substantives have been compounded into a specific name this should be kept as a substantive unless the original author clearly has treated it as an adjective ; thus *ignipectus* should not be altered to *ignipectum* (p. 427). So also Eyton clearly intended *ignicapilla* to be a substantive and this should not be changed to *ignicapillus* (p. 437). Words compounded of an adjective and substantive are not so clear and I think one should follow the original author's spelling ; for instance Hume wrote *Zosterops aureiventer ;* did Hume make a grammatical error or did he intend his word to be a substantive ? He must have been perfectly well aware that *zosterops* is a feminine noun. Words derived from the Greek and ending in *os* are another difficulty. Latham and Linnæus spelt their specific names, if proper names and therefore substantives, with a capital but they clearly also intended words ending in *os* to be substantives also ; thus Latham in his genus *Certhia* makes all adjectival specific names agree in the feminine but he writes *Certhia erythorhynchos* and this should not be changed to *erythrorhynchum* when associated with *Dicæum* (p. 432) though such adjectives as *ceylonensis* (p. 433) and *siamensis* (p. 424) ought certainly to be altered to *ceylonense* and *siamense*. These are trivial points of no real importance but one still hopes for the uniformity in these matters which appears as unattainable as ever.

Corrigendum to vol. ii. *Phylloscopus t. sindianus*. I have since seen good series of breeding birds from Ladak and I think that there is no doubt that this race breeds there. I am not sure that still yet another race does not occur in the plains in winter ; three other races have been described by Russian ornithologists which if recognizable might occur in winter in India.

TWO NEW SPECIES OF GRASSES FROM PANCHGANI

(Satara District)

(*With two plates*)

BY

E. Blatter and C. McCann

Dichanthium panchganiense, Blatter and McCann, *spec. nov.* (*Andropogoneæ—Amphilophiastræ*). A *Dicanthio armato* Blatter and McCann (=*Andropogon armatus*, Hook f.) differt praesentia ligulae laceratae, gluma involucri inferiore spiculae sessilis, gluma involucri superiore spiculae pedicellatae semper foveolata.

Foveola supra indicata hanc speciem a *Dichanthio McCanni* infra descripto distinguit.

Annual, erect; stems up to 35 cm. long, slender, tufted or not, simple or branched from near the roots, smooth and shining; nodes bearded. Leaves up to 8 cm. by 4 mm., linear, acuminate, broadest in the middle, short-ciliate, on the margins, with long, bulbous-based hairs on the surfaces, which are much longer at base of the blade for about 5 mm.; sheath lax, margins and upper two-thirds covered with bulbous-based hairs, mouth with much longer bulbous-based hairs; ligule narrow, membranous, lacerate. Racemes digitate, 1-3, about 3 cm. long. One or two of lowest pairs of spikelets male. Peduncles up to 8 mm. long, capillary; joints and pedicels slender, not grooved, terete, hairy. Spikelets about 18 pairs. Sessile spikelets 3 mm. long; callus very short, bearded with silky hairs; lower involucral glume thin, broadly oblong, substruncate at apex, margins incurved, 7-nerved, always with a deep dorsal pit about $\frac{1}{3}$ from the apex, hirsute throughout except on the pit and the area between the pit and apex, upper involucral glume, oblong-lanceolate, longer than the lower, subacute at apex, keeled, glabrous except on the hairy keel. Lower floral glume oblong, flat, hyaline, nerveless, acute or obtuse at apex, a few scattered hairs on the margins; upper represented by a slender awn about 20 mm. long and twisted in the lower part. Pedicelled spikelets 4 mm. long, broader than the sessile. Lower involucral glume slightly convex, many-nerved, armed with spreading marginal bulbous-based bristles up to twice as long as the glumes, hairy between the bristles and on the dorsal surface, with a smooth shallow pit; upper slightly longer than the lower, broadly oblong, acute, 3 nerved, ciliate on the margins. Lower, floral glume oblong, obtuse, hyaline, nerveless, sparingly hairy; upper almost thread-like. Anthers yellow, filament forked, one branch bearing one anther, the other branch again forked.—Plate 1.

The pits observed in the sessile spikelets contain a viscid substance. It is not impossible that the latter plays a part in pollination.

Habitat: Found by C. McCann in the village and on the Tableland of Panchgani, Satara District of the Bombay Presidency, November 1925.

Dichanthium McCannii, Blatter, *spec. nov.* (*Andropogoneæ Amphilophiastrae*).

Dichanthio armato, Blatter and McCann (=*Andropogon armatus*, Hook f.) recedit praesentia ligulae, numero racemorum, magnitudine spicularum, nervis glumæ involucri inferioris spiculae sessilis, gluma involucri inferiore spiculae pedicellatae alis praedita, aliis ex descriptione patentibus.

An erect tufted grass; stems up to 45 cm. long, slender, simple or branched from about the middle, glabrous, shining, nodes densely long-bearded; internodes up to 7 cm. long. Leaves up to 10 cm. by 6 mm., linear-lanceolate, broadest at the base, amplexicaul, covered all over with bulbous-based hairs which are much longer at the base for about 15 mm; sheaths lax, covering the internodes for $\frac{1}{2}$ and more, glabrous except on the outer margin and the upper third of the whole sheath which are covered with bulbous-based hairs; ligule narrow, 1 mm. broad, made up of bristles united at the base. Racemes solitary or 2, up to 37 mm. long; the 3 or 4 lowest pairs of

spikelets all male and alike in shape; peduncles of binate racemes about 1 cm. long, capillary; joints and pedicels slender, of the lower 3 or 4 pairs of spikelets glabrous, of the rest a line of ciliate hairs all along on one side of joint and pedicel and with a few cilia on the opposite side. Spikelets up to 17 pairs. Sessile spikelets 4 mm. long; callus very short, bearded; lower involucral glume pale, 7-nerved, the central nerve running only half way up, 4 mm. long, not keeled, stiff-haired in the upper $\frac{2}{3}$ (no dorsal pit), margins much incurved, tip subobtuse, purplish; upper involucral glume slightly longer than the lower, broadly lanceolate, acute, margin incurved, keeled on the back, otherwise nerveless, hairy towards the tip along the margin and on keel. Lower floral glume narrowly oblong, rounded at apex, flat, hyaline, nerveless; upper represented by a slender awn, 28 mm. long, twisted in the middle third. Pedicellate spikelet 1 mm. longer than the sessile and broader. Lower involucral glume 5 mm. long, narrowly ellipsoid, acute at apex, slightly convex, strongly 10-nerved, very narrowly winged in the upper third, wings purplish, spinous-serrate with stiff hairs, armed with spreading submarginal bulbous-based bristles which are often as long as the glume, otherwise glabrous; upper involucral glume broadly lanceolate, slightly longer than the lower, 3-nerved, apex acute, margins broadly incurved, outer side glabrous, inner side silky hairy. Lower floral glume oblong, obtuse at apex, as long as the upper involucral glume, hyaline, margins silky-hairy in the upper half, upper narrowly oblong-lanceolate, hyaline, slightly shorter than the lower, apex acute.—Plate 2.

Habitat: Found by C McCann east or the third Tableland of Panchgani, Satara District of the Bombay Presidency, October 1925.

Text for Plate 1

Dichanthium panchganiense, Blatter and McCann, *sp. nov.* 1. Inflorescence. 2. Internode and leaf. 3. Upper part of leaf. 4. Ligule and lower part of leaf. 5. Sessile spikelet. 6. Lower involucral glume of s.s. 7. Upper involucral glume of s.s. 8. Lower floral glume of s.s. 9. Part of upper floral glume of s.s. 10. Pedicelled spikelet. 11. Lower involucral glume of p.s. 12*a*. Upper involucral glume of p.s., ventral side, 12*b*. Dorsal side. 13. Lower floral glume of p.s. 14. Upper floral glume of p.s. 15. Awn. 16. Part of awn. 17 and 18. Anthers. 19 and 20. Pistil. 21. Sessile and pedicelled spikelets.

Text for Plate 2

Dichanthium McCannii, Blatter, *sp. nov.* 1. Lower involucral glume of pedicelled spikelet. 2*a* Dorsal side, 2*b*. ventral side of upper involucral glume of p.s. 3. Lower floral glume of p.s. 4. Upper floral glume of p.s. 5 Lower involucral glume of sessile spikelet. 6. Upper involucral glume of s.s. 8 Upper floral glume of s.s. 9. Internode and leaf. 10. Lower part of leaf with ligule. 11 Sessile and pedicelled spikelets. 12. Joints and pedicels.